



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
PATENT
NOV 10 2003

TECH CENTER 1600/2900

IN THE APPLICATION OF:

LYNN M. ABELL ET AL.

CASE NO.: BB1255

APPLICATION NO.: 09/807,236

GROUP ART UNIT: 1652

FILED: AUGUST 27, 2001

EXAMINER: CHRISTIAN L. FRONDA

FOR: PLANT HISTIDINE BIOSYNTHETIC ENZYMES

**PRELIMINARY AMENDMENT AND
RESPONSE TO RESTRICTION REQUIREMENT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a Preliminary Amendment and Response to the Restriction Requirement set forth in the Office Action mailed August 1, 2003.

A Petition for Extension of Time for two (2) months up to and including November 3, 2003 (Monday), is filed simultaneously herewith.

Please enter the following:

Amendments to Specification begin on page 2.

Amendments to Claims begin on page 4.

Remarks begin on page 5.

Response to Restriction Requirement begin on page 6.

Search Notes

Am ndments to Claims

Claims 1-15 (cancelled)

- ✓ 16. (new) An isolated polynucleotide comprising:
- (a) a nucleotide sequence encoding a polypeptide having phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase activity, wherein the amino acid sequence of the polypeptide and SEQ ID NO:22 have at least 80% sequence identity, based on the Clustal alignment method with default pairwise alignment parameters of KTUPLE=1, GAP PENALTY=3, WINDOW=5 and DIAGONALS SAVED=5, or
- ✓ (b) the entire complement of the nucleotide sequence of (a).
- ✓ 17. (new) The polynucleotide of Claim 16, wherein the amino acid sequence of the polypeptide and SEQ ID NO:22 have at least 85% sequence identity, based on the Clustal alignment method with said default pairwise alignment parameters.
- ✓ 18. (new) The polynucleotide of Claim 16, wherein the amino acid sequence of the polypeptide and SEQ ID NO:22 have at least 90% sequence identity, based on the Clustal alignment method with said default pairwise alignment parameters.
- ✓ 19. (new) The polynucleotide of Claim 16, wherein the amino acid sequence of the polypeptide and SEQ ID NO:22 have at least 95% sequence identity, based on the Clustal alignment method with said default pairwise alignment parameters.
- ✓ 20. (new) The polynucleotide of claim 16, wherein the amino acid sequence of the polypeptide comprises SEQ ID NO:22.
- ✓ 21. (new) The polynucleotide of claim 16, wherein the nucleotide sequence comprises SEQ ID NO:21.
- ✓ 22. (new) A recombinant DNA construct comprising the polynucleotide of claim 16 operably linked to a regulatory sequence.
- ✓ 23. (new) A vector comprising the polynucleotide of claim 16.
- ✓ 24. A method for transforming a cell comprising transforming a cell with the polynucleotide of claim 16.
- ✓ 25. (new) A cell comprising the recombinant DNA construct of claim 22.
26. (new) A method for producing a plant comprising transforming a plant cell with the polynucleotide of claim 16 and regenerating a plant from the transformed plant cell.
27. (new) A plant comprising the recombinant DNA construct of claim 22.
28. (new) A seed comprising the recombinant DNA construct of claim 22.

#22 vs DNA
80%
C = I =

#21 vs DNA
80% #21
C = I =

REMARKS

Claims 16-28 are now pending, with claim 16 being the sole independent claim.

Claims 1-15 have been canceled without prejudice to or disclaimer of the subject matter recited therein.

Claims 16-28 have been added. Support for the reference to "phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase activity" in claim 16 is found at least in the paragraph at page 3, lines 29-32, and in Example 6, lines 7-22 of page 28 of the specification; in Example 6 the interchangeable term "HisA activity" is used. Support for the sequence identities and the Clustal default parameters recited in claims 16-19 is found at least in the paragraph beginning on line 23 of page 8 and continuing onto page 9 of the specification. Support for the use of the term "recombinant" in claims 22, 25, and 27-28, is found at least in the paragraph at page 13, lines 3-6 of the specification. Support for claims 26-28 are found at least in Examples 4-5, pages 22-26 of the specification. No new matter has been added.

The specification has been amended at two locations to remove reference to the following URL: www.ncbi.nlm.nih.gov/BLAST/.

RESPONSE TO RESTRICTION REQUIREMENT

In response to the Restriction Requirement in the Office Action mailed August 1, 2003, Applicants hereby elect, without traverse, Group I, claims 1-9, drawn to a polynucleotide and a host cell. Applicants further elect SEQ ID NOs:21 and 22, wherein SEQ ID NO:22 is the amino acid sequence encoded by the continuous open-reading frame corresponding to nucleotides 2-982 of SEQ ID NO:21. Applicants submit that now pending Claims 16-28 are directed to Group I and SEQ ID NOs:21 and 22.

Please charge any fees or credit any overpayment of fees which are required in connection herewith to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



J KENNETH JOUNG
Attorney for Applicant
Registration No.: 41,881
Telephone: (302) 992-4929
Facsimile: (302) 892-1026

Dated: 3 November 2003